



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW1923G-A BYPASS RATIO: 11.2
 UNIQUE ID NUMBER: 04P20PW203 PRESSURE RATIO (π_{co}): 37.7
 COMBUSTOR: TALON X, Block-C
 ENGINE TYPE: TF RATED THRUST (F_{oo}) (kN): 105.9

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D_p/F_{oo} (g/kN) or SN	0.3	26.1	39.4	4.0
AS % OF ORIGINAL LIMIT	2.0	22.0	34.0	17.0
AS % OF CAEP/2 LIMIT (NO _x)			43.0	
AS % OF CAEP/4 LIMIT (NO _x)			48.0	
AS % OF CAEP/6 LIMIT (NO _x)			53.0	
AS % OF CAEP/8 LIMIT (NO _x)			60.0	

For non-volatile particulate matter (nvPM) emissions, please refer to the ICAO Engine nvPM Emissions Data Sheet.

DATA STATUS

- PRE-REGULATION
 x CERTIFICATION
 - REVISED (SEE REMARKS)

TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES
 x DEDICATED ENGINES TO PRODUCTION STANDARD
 - OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE
 (ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)
 - OUT OF PRODUCTION (DATE: -)
 - OUT OF SERVICE (DATE: -)

MEASURED DATA

MODE	POWER SETTING (% F_{oo})	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO _x	
TAKE-OFF	100	0.7	0.760	0.00	0.00	24.20	3.1
CLIMB OUT	85	2.2	0.630	0.00	0.00	19.30	1.8
APPROACH	30	4.0	0.220	0.10	2.30	10.20	0.8
IDLE	7	26.0	0.070	0.10	18.40	5.70	0.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			285	19	2256	3599	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D_p/F_{oo} (g/kN) or AVERAGE SN (MAX)				0.2	21.3	34.0	3.1
SIGMA (D_p/F_{oo} in g/kN, or SN)							
RANGE (D_p/F_{oo} in g/kN, or SN)				0.1-0.3	21.1-21.5	33.7-34.2	2.7-3.9

ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	102-103.3
TEMPERATURE (K)	272-278.1
ABS HUMIDITY (kg/kg)	0.00122-0.00221

FUEL

SPEC	Jet A
H/C	1.94
AROM (%)	17.8-18.4

MANUFACTURER: Pratt & Whitney
 TEST ORGANIZATION: Pratt & Whitney
 TEST LOCATION: Mirabel Aerospace Centre - Quebec
 TEST DATES: 25/03/2018-26/03/2018

NO_x REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
x	2.3.2 e) (CAEP/8)

REMARKS

- Data from Certification Report PWA-11601
- Block C combustor
- Certification in accordance with Part III, Chapter 2, of Amendment 8 of ICAO Annex 16 Vol. II.
- NO_x levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

Compliance with Fuel Venting requirements:

x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)